

Customer No.: 31561
Application No.: 10/604,171
Docket No.: 10239-US-PA

AMENDMENTS

In The Claims

Claim 1. (currently amended) A service station for the a print head of a print module in a printing system, comprising:

a base;

a first direction-changing mechanism set up on the base;

a first moving mechanism set up on the base and coupled to the first direction-changing mechanism;

a wiper set up on the first moving mechanism, wherein the print module drives the first direction-changing mechanism and, in turn, drives the first moving mechanism so that the wiper ~~are~~ is set in motion and slides across the print head to clear away dried ink from the print head;

a second direction-changing mechanism set up on the base;

a second moving mechanism set up on the base and coupled to the second direction-changing mechanism; and

at least one cap set up on the second moving mechanism, wherein the print module drives the second direction-changing mechanism and, in turn, drives the second moving mechanism so that the cap ~~are~~ is moved to a position that seals off the print head.

Claim 2. (original) The service station of claim 1, wherein the first direction-changing mechanism furthermore comprises a gear, a rod and a bumper plate, the gear is

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connected to the base, one end of the rod connects with the gear, the other end of the rod connects with the bumper plate and the bumper plate is positioned on ~~the~~ a traveling path of the print module so that ~~the~~ a rotation of the gear caused by the rotation of the rod when the print module acts on the bumper plate drives the first moving mechanism.

Claim 3. (original) The service station of claim 2, wherein the base furthermore comprises a groove and the first moving mechanism furthermore comprises a wiping base, a sliding track and a gear rack, the wiper is set up on the wiping base, the sliding track and the gear rack are also set up on the wiping base with the sliding track engaged with the groove on the base, and the gear rack and the gear of the first direction-changing mechanism are coupled together so that the wiping base moves when the gear rack is driven by the gear.

Claim 4. (original) The service station of claim 1, wherein an angle between the direction of movement of the print module and the direction of movement of the cap is greater than or equal to 70° .

Claim 5. (original) The service station of claim 1, wherein the second direction-changing mechanism furthermore comprises a gear, a rod and a bumper plate, the gear is connected on the base, one end of the rod connects with the gear, the other end of the rod connects with the bumper plate, the bumper plate is located in a position on ~~the~~ a traveling path of the print module so that ~~the~~ a rotation of the gear caused by the rotation of the rod when the print module acts on the bumper plate drives the second moving mechanism.

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Claim 6. (original) The service station of claim 5, wherein the base furthermore comprises a groove and the second moving mechanism furthermore comprises a capping base, a sliding track and a gear rack, the capping base has a surface with the cap set up thereon, the sliding track and the gear rack are also set up on the capping base with the sliding track engaged with the groove on the base, the gear rack and the gear of the second direction-changing mechanism are coupled together so that the capping base moves when the gear rack is driven by the gear.

Claim 7. (currently amended) A service station for ~~the~~ a print head of a print module in a printing system, at least comprising:

a base;

a direction-changing mechanism set up on the base;

a moving mechanism set up on the base and coupled to the direction-changing mechanism; and

a wiper set up on the moving mechanism, wherein the print module drives the direction-changing mechanism and, in turn, drives the moving mechanism so that the wiper ~~are~~ is set in motion and slides across the print head to clear away dried ink from the print head.

Claim 8. (original) The service station of claim 7, wherein the direction-changing mechanism furthermore comprises a gear, a rod and a bumper plate, the gear is connected to the base, one end of the rod connects with the gear, the other end of the rod connects

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with the bumper plate and the bumper plate is positioned on ~~the~~ a traveling path of the print module so that ~~the~~ a rotation of the gear caused by the rotation of the rod when the print module acts on the bumper plate drives the moving mechanism.

Claim 9. (original) The service station of claim 8, wherein the base furthermore comprises a groove and the moving mechanism furthermore comprises a wiping base, a sliding track and a gear rack, the wiper is set up on the wiping base, the sliding track and the gear rack are also set up on the wiping base with the sliding track engaged with the groove on the base, the gear rack and the gear of the direction-changing mechanism are coupled together so that the wiping base moves when the gear rack is driven by the gear.

Claim 10.(original) The service station of claim 7, wherein an angle between the direction of movement of the print module and the direction of movement of the wiper is greater than or equal to 70° .

Claim 11. (currently amended) A method of cleaning ~~the~~ a print head of a print module in a printing system, wherein the printing system comprises a direction-changing mechanism, a moving mechanism and a wiper such that the direction-changing mechanism and the moving mechanism are coupled and the wiper is connected to the moving mechanism, the method comprising the steps of:

driving the print module to impart a rotary action to the direction-changing mechanism;

generating a linear motion to the moving mechanism by the rotary action of the

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direction-changing mechanism; and

sliding the wiper across the print head to scrap ~~scraping~~ off dried ink from the print head by the motion of wiper driven by the linear motion of the moving mechanism.

Claim 12. (original) The method of claim 11, wherein an angle between the direction of movement of the print module and the direction of movement of the wiper is greater than or equal to 70° .

Claim 13. (currently amended) A method of sealing ~~the~~ a print head of a print module in a printing system, wherein the printing system comprises a direction-changing mechanism, a moving mechanism and a cap with the direction-changing mechanism and the moving mechanism coupled together and the cap set up on the moving mechanism, the method comprising the steps of:

driving the print module to impart a rotary action to the direction-changing mechanism;

generating a linear motion to the moving mechanism by the rotary action of the direction-changing mechanism; and

lifting the cap toward the print head to seal ~~sealing~~ the print head by the motion of the cap driven by the linear motion of the moving mechanism.

Claim 14. (new) The service station of claim 1, wherein the cap is lifted toward the print head to seal the print head.

Claim 15. (new) The service station of claim 1, wherein an angle between the

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direction of movement of the print module and the direction of movement of the wiper is greater than or equal to 70° .

Claim 16. (new) The service station of claim 13, wherein an angle between the direction of movement of the print module and the direction of movement of the cap is approximately 90° .